

## ABSTRACT

A channel-estimating apparatus having an input unit (2) receiving several pieces of channel information (5) from a plurality of receivers (10), (11), in which the  
5 plurality of receivers (10), (11) perform MIMO communication through a plurality of channels. Further, the channel-estimating apparatus includes an estimating unit (3) collectively estimating statuses of the plurality of channels in accordance with the several pieces of channel information (5) received by the input unit (2), to thereby generate estimation results (6), and includes an output unit (4) outputting the estimation  
10 results (6) into the plurality of receivers (10), (11). As a result, interference from other pieces of MIMO communication-adapted communication equipment is suppressible, with consequential improvements in both quality and capacity of communication.